



TETRA TECH NUS

N00158.AR.000266
NAS WILLOW GROVE
5090.3a

PHIL-21218

TO: RUSS TURNER **DATE:** JULY 16, 2007
FROM: MEGAN N. RITCHIE **COPIES:** FILE
SUBJECT: INORGANIC DATA VALIDATION – METALS, CYANIDE, PERCENT SOLIDS
NAS JRB WILLOW GROVE SITE 3, WILLOW GROVE, PENNSYLVANIA
SDG NO. C7E030139
SAMPLES: 5/Solid/
03TP07-0203-02 03TP07-0304-01 03TP08-0203-03 03TP08-0304-02
03TP08-0405-01

OVERVIEW

The sample set for the NAS JRB Willow Grove Site 3 Test Pits – Willow Grove, PA, SDG C7E030139 consists of 5 solid environmental samples (designated 03TP07- and 03TP08-). No matrix spike samples were designated for this sample set. No field duplicate pairs were included in this sample set. All samples were analyzed for target analyte list (TAL) metals and cyanide.

The samples were collected by Tetra Tech NUS on May 2, 2007 and analyzed by Severn Trent Laboratories (STL) of Pittsburgh, Pennsylvania.

EPA SW-846 Methods were conducted using 6010B for ICP-AES metals, 7471A for mercury, and 9012A for cyanide. Percent solids were analyzed by EPA Method 160.3 modified.

SUMMARY

Most analytes were successfully analyzed in all samples. The findings offered in this report are based upon a general review of all available data including data completeness, holding times until analysis, calibration data, laboratory blank results, ICP interference check samples, matrix spike (MS) and matrix spike duplicate (MSD) results, laboratory control spike (LCS) results, field duplicate results, ICP serial dilution results, detection limits, and analyte quantitation.

Areas of concern with respect to data quality are listed below as follows:

MINOR PROBLEMS

- Selenium, sodium, and thallium exhibited negative concentrations with absolute values greater than the MDL in ICS solution A, which indicates the potential for negative bias to an extent that depends on the sample mineral concentrations. For non-detected selenium, sodium, and thallium results, when the MDL was less than the absolute value of the predicted magnitude of negative interference, such results were qualified as unusable (UR).

MINOR PROBLEMS

- The following table summarizes the analytes detected as contaminants in the laboratory blanks at the maximum concentration indicated:

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<u>Analyte</u>	<u>Maximum Concentration</u>	<u>Action Level</u>
Aluminum	19.7 ug/L	9.85 mg/kg
Antimony	1.9 ug/L	0.95 mg/kg
Beryllium	0.9 ug/L	0.45 mg/kg
Lead	2.4 ug/L	1.2 mg/kg
Manganese	0.4 ug/L	0.2 mg/kg
Potassium	19.5 mg/kg	97.5 mg/kg
Silver	0.4 ug/L	0.2 mg/kg
Zinc	0.27 mg/kg	1.35 mg/kg

Samples affected: The action levels apply to all solid environmental samples.

Dilution factors, percent solids, and sample preparation weights were taken into account during application of action levels. Results reported at concentrations within the action level are qualified (B) and are considered to be false positives (artifacts of blank contamination). No action was taken for aluminum, antimony, beryllium, lead, manganese, potassium, and zinc because the results exceeded the action level or there were no positive results for these analytes.

- Selenium exhibited negative concentrations with absolute values greater than the MDL in ICS solution A, which indicates the potential for negative bias to an extent that depends on the sample mineral concentrations. For positive selenium results, when the sample concentration was less than 10 times the absolute value of the expected interference, such results were qualified as biased low (L).
- Selenium, sodium, and thallium exhibited negative concentrations with absolute values greater than the MDL in ICS solution A, which indicates the potential for negative bias to an extent that depends on the sample mineral concentrations. For non-detected selenium, sodium, and thallium results, when the absolute value of the predicted magnitude of negative interference was less than the MDL but more than one-tenth of the MDL, such results were qualified as biased low (UL).
- The MSD recovery for chromium exceeded the upper QC limit of 120%. All positive results for this analyte were qualified as biased high (K).
- The MS/MSD recoveries for antimony were below the lower QC limit of 80%. All positive and non-detected results for antimony were qualified as biased low (L/UL).

NOTES

A 5X dilution as required for zinc in sample 03TP08-0203-03 because the original analysis concentration for zinc was over the instruments linear range.

The cyanide and percent solids data are acceptable as reported by the laboratory.

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EXECUTIVE SUMMARY

Laboratory Performance: Many analytes displayed signals with absolute values greater than the MDL in the ICP Interference Check Sample A. Three of these analytes may have produced bias in the sample analyses. Several analytes were present in the laboratory blanks.

Other Factors Affecting Data Quality: MS/MSD recoveries were outside QC criteria for two analytes.

The data for these analyses were reviewed with reference to the EPA "Functional Guidelines for Inorganic Data Review", as amended for use within EPA Region 3 (4/93).

The text of this report has been formatted to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the Functional Guidelines and the Quality Assurance Project Plan (QAPjP)."

Megan N. Ritchie
Megan N. Ritchie
Chemist

Russell Sloboda
Tetra Tech NUS, Inc.
Russ Sloboda
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

Qualified Analytical Results

PROJ_NO: 2192

SDG: C7E030139 MEDIA: SOIL DATA FRACTION: M

nsample 03TP07-0203-02
 samp_date 5/2/2007
 lab_id C7E030139002
 qc_type NM
 units MG/KG
 Pct_Solids 82.0
 DUP_OF:

Parameter	Result	Val Qual	Qual Code
ALUMINUM	24700		
ANTIMONY	0.39	UL	D
ARSENIC	2.8		
BARIUM	128		
BERYLLIUM	0.97		
CADMIUM	0.085	U	
CALCIUM	253		
CHROMIUM	7.7	K	D
COBALT	10		
COPPER	44.9		
IRON	15400		
LEAD	4.3		
MAGNESIUM	660		
MANGANESE	936		
MERCURY	0.057		
NICKEL	11.5		
POTASSIUM	272		
SELENIUM	0.32	UL	K
SILVER	0.036	U	
SODIUM	19.1	UR	K
THALLIUM	0.56	UL	K
VANADIUM	17.7		
ZINC	18		

nsample 03TP07-0304-01
 samp_date 5/2/2007
 lab_id C7E030139001
 qc_type NM
 units MG/KG
 Pct_Solids 83.0
 DUP_OF:

Parameter	Result	Val Qual	Qual Code
ALUMINUM	21700		
ANTIMONY	0.39	UL	D
ARSENIC	4.1		
BARIUM	69.5		
BERYLLIUM	0.74		
CADMIUM	0.084	U	
CALCIUM	624		
CHROMIUM	16.4	K	D
COBALT	10.5		
COPPER	28.6		
IRON	21000		
LEAD	7.4		
MAGNESIUM	1370		
MANGANESE	606		
MERCURY	0.057		
NICKEL	12.2		
POTASSIUM	503		
SELENIUM	0.32	UL	K
SILVER	0.052	B	A
SODIUM	18.9	UR	K
THALLIUM	0.55	UL	K
VANADIUM	30.4		
ZINC	25.8		

nsample 03TP08-0203-03
 samp_date 5/2/2007
 lab_id C7E030139005
 qc_type NM
 units MG/KG
 Pct_Solids 71.0
 DUP_OF:

Parameter	Result	Val Qual	Qual Code
ALUMINUM	18000		
ANTIMONY	29.7	L	D
ARSENIC	6.3		
BARIUM	518		
BERYLLIUM	0.86		
CADMIUM	24.2		
CALCIUM	17900		
CHROMIUM	49.5	K	D
COBALT	18.3		
COPPER	734		
IRON	27200		
LEAD	2010		
MAGNESIUM	8650		
MANGANESE	712		
MERCURY	0.73		
NICKEL	150		
POTASSIUM	1000		
SELENIUM	0.55	L	K
SILVER	8		
SODIUM	529		
THALLIUM	0.64	UR	K
VANADIUM	28.2		
ZINC	2260		

PROJ_NO: 2192

SDG: C7E030139 MEDIA: SOIL DATA FRACTION: M

nsample 03TP08-0304-02
 samp_date 5/2/2007
 lab_id C7E030139004
 qc_type NM
 units MG/KG
 Pct_Solids 83.0
 DUP_OF:

Parameter	Result	Val Qual	Qual Code
ALUMINUM	18700		
ANTIMONY	0.38	UL	D
ARSENIC	2.2		
BARIUM	149		
BERYLLIUM	1		
CADMIUM	0.084	U	
CALCIUM	365		
CHROMIUM	4.2	K	D
COBALT	6.1		
COPPER	93.1		
IRON	10600		
LEAD	2.2		
MAGNESIUM	408		
MANGANESE	879		
MERCURY	0.067		
NICKEL	7.8		
POTASSIUM	191		
SELENIUM	0.31	UL	K
SILVER	0.036	U	
SODIUM	18.8	UL	K
THALLIUM	0.55	UL	K
VANADIUM	11.8		
ZINC	10.6		

nsample 03TP08-0405-01
 samp_date 5/2/2007
 lab_id C7E030139003
 qc_type NM
 units MG/KG
 Pct_Solids 73.0
 DUP_OF:

Parameter	Result	Val Qual	Qual Code
ALUMINUM	29600		
ANTIMONY	41.9	L	D
ARSENIC	9.9		
BARIUM	735		
BERYLLIUM	0.84		
CADMIUM	51.5		
CALCIUM	6740		
CHROMIUM	133	K	D
COBALT	11.2		
COPPER	932		
IRON	60400		
LEAD	4640		
MAGNESIUM	2340		
MANGANESE	1520		
MERCURY	0.35		
NICKEL	84.6		
POTASSIUM	1070		
SELENIUM	0.36	UR	K
SILVER	34		
SODIUM	1200		
THALLIUM	0.62	UR	K
VANADIUM	21.7		
ZINC	2560		

PROJ_NO: 2192

SDG: C7E030139 MEDIA: SOIL DATA FRACTION: MISC

nsample 03TP07-0203-02
samp_date 5/2/2007
lab_id C7E030139002
qc_type NM
Pct_Solids 82.0
DUP_OF:

nsample 03TP07-0304-01
samp_date 5/2/2007
lab_id C7E030139001
qc_type NM
Pct_Solids 83.0
DUP_OF:

nsample 03TP08-0203-03
samp_date 5/2/2007
lab_id C7E030139005
qc_type NM
Pct_Solids 71.0
DUP_OF:

Parameter	units	Result	Val Qual	Qual Code
CYANIDE	MG/KG	0.18		
PERCENT SOLIDS	%	82.1		

Parameter	units	Result	Val Qual	Qual Code
CYANIDE	MG/KG	0.6	U	
PERCENT SOLIDS	%	82.8		

Parameter	units	Result	Val Qual	Qual Code
CYANIDE	MG/KG	0.18		
PERCENT SOLIDS	%	70.8		

PROJ_NO: 2192

SDG: C7E030139 MEDIA: SOIL DATA FRACTION: MISC

nsample 03TP08-0304-02
samp_date 5/2/2007
lab_id C7E030139004
qc_type NM
Pct_Solids 83.0
DUP_OF:

Parameter	units	Result	Val Qual	Qual Code
CYANIDE	MG/KG	0.2		
PERCENT SOLIDS	%	83.1		

nsample 03TP08-0405-01
samp_date 5/2/2007
lab_id C7E030139003
qc_type NM
Pct_Solids 73.0
DUP_OF:

Parameter	units	Result	Val Qual	Qual Code
CYANIDE	MG/KG	2.2		
PERCENT SOLIDS	%	73.3		

Data Qualifier Key:

- B - Positive result is considered to be an artifact of blank contamination and should not be considered present.
- J - Value is considered estimated due to exceedance of technical quality control or because result is less than the Contract Required Quantitation Limit (CRQL).
- L - Positive result is considered biased low due to exceedance of technical quality control criteria.
- U - Value is a non-detected result as reported by the laboratory.
- UL - Non-detected result is considered biased low due to exceedance of technical quality control criteria.

Qualifier Codes:

- a = Lab Blank Contamination
- b = Field Blank Contamination
- c = Calibration (i.e., %RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
- d = MS/MSD Noncompliance
- e = LSC/LSCD Noncompliance
- f = Laboratory Duplicate Imprecision
- g = Field Duplicate Imprecision
- h = Holding Time Exceedance
- i = ICP Serial Dilution Noncompliance
- j = GFAA PDS – GFAA MSA's $r < 0.995$ (correlation coefficient)
- k = ICP Interference – include ICSAB %Rs
- l = Instrument Calibration Range Exceedance
- m = Sample Preservation
- n = Internal Standard Noncompliance
- o = Poor Instrument Performance (i.e. baseline drifting)
- p = Uncertainty Near Detection Limit ($< 2 \times IDL$ for inorganics and $< CRQL$ for organics)
- q = Other Problems (can encompass of number of issues)
- r = Surrogates Recovery Noncompliance
- s = Pesticide/PCB Resolution
- t = % Breakdown Noncompliance for DDT and Endrin
- u = Pesticide/PCB % Difference Between Columns for Positive Results
- v = Non-linear Calibrations, Tuning $r < 0.995$ (correlation coefficient)

APPENDIX B

Results as Reported by the Laboratory

Tetra Tech NUS, Inc

Client Sample ID: 03TP07-0203-02

TOTAL Metals

Lot-Sample #....: C7E030139-002
 Date Sampled....: 05/02/07
 % Moisture.....: 18

Matrix.....: SOLID

Date Received..: 05/03/07

PARAMETER	RESULT	REPORTING			PREPARATION- ANALYSIS DATE	WORK ORDER #
		LIMIT	UNITS	METHOD		
Prep Batch #....: 7128178						
Silver	ND	0.61	mg/kg	SW846 6010B	05/09-05/16/07	JV6L01AT
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.036
Aluminum	24700 B	24.4	mg/kg	SW846 6010B	05/09-05/16/07	JV6L01AU
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.97
Arsenic	2.8	1.2	mg/kg	SW846 6010B	05/09-05/16/07	JV6L01AV
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.40
Barium	128	24.4	mg/kg	SW846 6010B	05/09-05/16/07	JV6L01AW
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.12
Beryllium	0.97	0.49	mg/kg	SW846 6010B	05/09-05/16/07	JV6L01AX
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.051
Calcium	253 J	609	mg/kg	SW846 6010B	05/09-05/16/07	JV6L01AO
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 4.8
Cadmium	ND	0.61	mg/kg	SW846 6010B	05/09-05/16/07	JV6L01AI
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.085
Cobalt	10	6.1	mg/kg	SW846 6010B	05/09-05/16/07	JV6L01A2
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.064
Chromium	7.7	0.61	mg/kg	SW846 6010B	05/09-05/16/07	JV6L01A3
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.11

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Tetra Tech NUS, Inc

Client Sample ID: 03TP07-0203-02

TOTAL Metals

Lot-Sample #....: C7E030139-002

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK
		LIMIT	UNITS			ANALYSIS DATE	ORDER #
Copper	44.9	3.0	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01A4
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.14	
Iron	15400	12.2	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01AS
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 2.2	
Potassium	272 J,B	609	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01A6
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 9.1	
Magnesium	660	609	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01A7
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 1.2	
Manganese	936 B	1.8	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01A8
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.014	
Sodium	ND	609	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01AA
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 19.1	
Nickel	11.5	4.9	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01AC
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.15	
Lead	4.3	0.37	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01AD
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.19	
Antimony	ND	1.2	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01AE
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.39	
Selenium	ND	0.61	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01AF
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.32	

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Tetra Tech NUS, Inc

Client Sample ID: 03TP07-0203-02

TOTAL Metals

Lot-Sample #....: C7E030139-002

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK
		LIMIT	UNITS			ANALYSIS DATE	ORDER #
Thallium	ND	1.2	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01AG
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.56	
Vanadium	17.7	6.1	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01AH
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.13	
Zinc	18.0 B	2.4	mg/kg		SW846 6010B	05/09-05/16/07	JV6L01AJ
		Dilution Factor: 1		Analysis Time...: 14:25		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.21	
Prep Batch #....: 7142193							
Mercury	0.057	0.040	mg/kg		SW846 7471A	05/22/07	JV6L01AR
		Dilution Factor: 1		Analysis Time...: 15:04		Analyst ID.....: 400883	
		Instrument ID...: HGHYDRA		MS Run #.....: 7142126		MDL.....: 0.0087	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Blank contamination: Target analyte was detected at a reportable level.

J Estimated Result: Result is less than RL and greater than or equal to the MDL.

Tetra Tech NUS, Inc

Client Sample ID: 03TP07-0304-01

TOTAL Metals

Lot-Sample #....: C7E030139-001 Matrix.....: SOLID
 Date Sampled...: 05/02/07 Date Received..: 05/03/07
 % Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #....:	7128178					
Silver	0.052 J	0.60	mg/kg	SW846 6010B	05/09-05/16/07	JV6LP1AH
		Dilution Factor: 1		Analysis Time...: 14:58	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.036
Aluminum	21700 B	24.1	mg/kg	SW846 6010B	05/09-05/16/07	JV6LP1AJ
		Dilution Factor: 1		Analysis Time...: 14:58	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.96
Arsenic	4.1	1.2	mg/kg	SW846 6010B	05/09-05/16/07	JV6LP1AK
		Dilution Factor: 1		Analysis Time...: 14:58	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.40
Barium	69.5	24.1	mg/kg	SW846 6010B	05/09-05/16/07	JV6LP1AL
		Dilution Factor: 1		Analysis Time...: 14:58	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.12
Beryllium	0.74	0.48	mg/kg	SW846 6010B	05/09-05/16/07	JV6LP1AM
		Dilution Factor: 1		Analysis Time...: 14:58	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.050
Calcium	624	604	mg/kg	SW846 6010B	05/09-05/16/07	JV6LP1AN
		Dilution Factor: 1		Analysis Time...: 14:58	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	4.8
Cadmium	ND	0.60	mg/kg	SW846 6010B	05/09-05/16/07	JV6LP1AP
		Dilution Factor: 1		Analysis Time...: 14:58	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.084
Cobalt	10.5	6.0	mg/kg	SW846 6010B	05/09-05/16/07	JV6LP1AQ
		Dilution Factor: 1		Analysis Time...: 14:58	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.064
Chromium	16.4	0.60	mg/kg	SW846 6010B	05/09-05/16/07	JV6LP1AR
		Dilution Factor: 1		Analysis Time...: 14:58	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.11

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Tetra Tech NUS, Inc

Client Sample ID: 03TP07-0304-01

TOTAL Metals

Lot-Sample #....: C7E030139-001

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK
		LIMIT	UNITS	ANALYSIS DATE			
Copper	28.6	3.0	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1AT
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.14	
Iron	21000	12.1	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1AU
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 2.2	
Potassium	503 J,B	604	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1AV
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 9.1	
Magnesium	1370	604	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1AW
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 1.2	
Manganese	606 B	1.8	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1AX
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.014	
Sodium	ND	604	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1AO
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 18.9	
Nickel	12.2	4.8	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1A1
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.15	
Lead	7.4	0.36	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1A2
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.19	
Antimony	ND	1.2	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1A3
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.39	
Selenium	ND	0.60	mg/kg	SW846 6010B		05/09-05/16/07	JV6LP1A4
		Dilution Factor: 1		Analysis Time...: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.32	

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Tetra Tech NUS, Inc

Client Sample ID: 03TP07-0304-01

TOTAL Metals

Lot-Sample #: C7E030139-001

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK
		LIMIT	UNITS			ANALYSIS DATE	ORDER #
Thallium	ND	1.2	mg/kg		SW846 6010B	05/09-05/16/07	JV6LP1A5
		Dilution Factor: 1		Analysis Time..: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.55	
Vanadium	30.4	6.0	mg/kg		SW846 6010B	05/09-05/16/07	JV6LP1A6
		Dilution Factor: 1		Analysis Time..: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.13	
Zinc	25.8 B	2.4	mg/kg		SW846 6010B	05/09-05/16/07	JV6LP1A7
		Dilution Factor: 1		Analysis Time..: 14:58		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.20	
Prep Batch #...: 7142193							
Mercury	0.057	0.040	mg/kg		SW846 7471A	05/22/07	JV6LP1AG
		Dilution Factor: 1		Analysis Time..: 14:59		Analyst ID.....: 400883	
		Instrument ID...: HGHYDRA		MS Run #.....: 7142126		MDL.....: 0.0086	

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated Result: Result is less than RL and greater than or equal to the MDL.

B Blank contamination: Target analyte was detected at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: 03TP08-0203-03

TOTAL Metals

Lot-Sample #....: C7E030139-005 **Matrix.....:** SOLID
Date Sampled....: 05/02/07 **Date Received..:** 05/03/07
% Moisture.....: 29

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....:	712817B					
Silver	8.0	0.71	mg/kg	SW846 6010B	05/09-05/16/07	JV6L81AT
		Dilution Factor: 1		Analysis Time...: 14:52	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.042
Aluminum	18000 B	28.2	mg/kg	SW846 6010B	05/09-05/16/07	JV6L81AU
		Dilution Factor: 1		Analysis Time...: 14:52	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	1.1
Arsenic	6.3	1.4	mg/kg	SW846 6010B	05/09-05/16/07	JV6L81AV
		Dilution Factor: 1		Analysis Time...: 14:52	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.47
Barium	518	28.2	mg/kg	SW846 6010B	05/09-05/16/07	JV6L81AW
		Dilution Factor: 1		Analysis Time...: 14:52	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.14
Beryllium	0.86	0.56	mg/kg	SW846 6010B	05/09-05/16/07	JV6L81AX
		Dilution Factor: 1		Analysis Time...: 14:52	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.059
Calcium	17900	706	mg/kg	SW846 6010B	05/09-05/16/07	JV6L81AO
		Dilution Factor: 1		Analysis Time...: 14:52	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	5.6
Cadmium	24.2	0.71	mg/kg	SW846 6010B	05/09-05/16/07	JV6L81A1
		Dilution Factor: 1		Analysis Time...: 14:52	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.098
Cobalt	18.3	7.1	mg/kg	SW846 6010B	05/09-05/16/07	JV6L81A2
		Dilution Factor: 1		Analysis Time...: 14:52	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.075
Chromium	49.5	0.71	mg/kg	SW846 6010B	05/09-05/16/07	JV6L81A3
		Dilution Factor: 1		Analysis Time...: 14:52	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.13

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Tetra Tech NUS, Inc

Client Sample ID: 03TP08-0203-03

TOTAL Metals

Lot-Sample #....: C7E030139-005

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	ANALYSIS DATE	PREPARATION-	WORK
		LIMIT	UNITS					
Copper	734	3.5	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81A4	
		Dilution Factor: 1			Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 7128111		MDL.....: 0.16	
Iron	27200	14.1	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81A5	
		Dilution Factor: 1			Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 7128111		MDL.....: 2.5	
Potassium	1000 B	706	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81A6	
		Dilution Factor: 1			Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 7128111		MDL.....: 10.6	
Magnesium	8650	706	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81A7	
		Dilution Factor: 1			Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 7128111		MDL.....: 1.4	
Manganese	712 B	2.1	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81A8	
		Dilution Factor: 1			Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 7128111		MDL.....: 0.016	
Sodium	529 J	706	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81AA	
		Dilution Factor: 1			Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 7128111		MDL.....: 22.1	
Nickel	150	5.6	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81AC	
		Dilution Factor: 1			Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACBICP			MS Run #.....: 7128111		MDL.....: 0.17	
Lead	2010	2.1	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81AD	
		Dilution Factor: 5			Analysis Time...: 22:52		Analyst ID.....: 022952	
		Instrument ID...: TRACBICP			MS Run #.....: 7128111		MDL.....: 1.1	
Antimony	29.7	1.4	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81AE	
		Dilution Factor: 1			Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 7128111		MDL.....: 0.45	
Selenium	0.55 J	0.71	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81AF	
		Dilution Factor: 1			Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 7128111		MDL.....: 0.37	

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Tetra Tech NUS, Inc

Client Sample ID: 03TP08-0203-03

TOTAL Metals

Lot-Sample #....: C7E030139-005

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK
		LIMIT	UNITS			ANALYSIS DATE	ORDER #
Thallium	ND	1.4	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81AG
		Dilution Factor: 1		Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.64	
Vanadium	28.2	7.1	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81AH
		Dilution Factor: 1		Analysis Time...: 14:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.15	
Zinc	2260 B	14.1	mg/kg		SW846 6010B	05/09-05/16/07	JV6L81AJ
		Dilution Factor: 5		Analysis Time...: 22:52		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 1.2	
Prep Batch #....: 7142193							
Mercury	0.73	0.047	mg/kg		SW846 7471A	05/22/07	JV6L81AR
		Dilution Factor: 1		Analysis Time...: 15:09		Analyst ID.....: 400883	
		Instrument ID...: HGHYDRA		MS Run #.....: 7142126		MDL.....: 0.010	

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

B Blank contamination: Target analyte was detected at a reportable level.

J Estimated Result: Result is less than RL and greater than or equal to the MDL.

Tetra Tech NUS, Inc

Client Sample ID: 03TP08-0304-02

TOTAL Metals

Lot-Sample #....: C7E030139-004 Matrix.....: SOLID
 Date Sampled...: 05/02/07 Date Received..: 05/03/07
 % Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #....:	7128178					
Silver	ND	0.60	mg/kg	SW846 6010B	05/09-05/16/07	JV6L61AT
		Dilution Factor: 1		Analysis Time...: 14:47	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.036
Aluminum	18700 B	24.1	mg/kg	SW846 6010B	05/09-05/16/07	JV6L61AU
		Dilution Factor: 1		Analysis Time...: 14:47	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.96
Arsenic	2.2	1.2	mg/kg	SW846 6010B	05/09-05/16/07	JV6L61AV
		Dilution Factor: 1		Analysis Time...: 14:47	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.40
Barium	149	24.1	mg/kg	SW846 6010B	05/09-05/16/07	JV6L61AW
		Dilution Factor: 1		Analysis Time...: 14:47	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.12
Beryllium	1.0	0.48	mg/kg	SW846 6010B	05/09-05/16/07	JV6L61AX
		Dilution Factor: 1		Analysis Time...: 14:47	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.050
Calcium	365 J	601	mg/kg	SW846 6010B	05/09-05/16/07	JV6L61A0
		Dilution Factor: 1		Analysis Time...: 14:47	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	4.8
Cadmium	ND	0.60	mg/kg	SW846 6010B	05/09-05/16/07	JV6L61A1
		Dilution Factor: 1		Analysis Time...: 14:47	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.084
Cobalt	6.1	6.0	mg/kg	SW846 6010B	05/09-05/16/07	JV6L61A2
		Dilution Factor: 1		Analysis Time...: 14:47	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.063
Chromium	4.2	0.60	mg/kg	SW846 6010B	05/09-05/16/07	JV6L61A3
		Dilution Factor: 1		Analysis Time...: 14:47	Analyst ID.....:	022952
		Instrument ID...: TRACEICP		MS Run #.....: 7128111	MDL.....:	0.11

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Tetra Tech NUS, Inc

Client Sample ID: 03TP08-0304-02

TOTAL Metals

Lot-Sample #...: C7E030139-004

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK
		LIMIT	UNITS			ANALYSIS DATE	ORDER #
Copper	93.1	3.0	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61A4
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.14	
Iron	10600	12.0	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61A5
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 2.2	
Potassium	191 J,B	601	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61A6
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 9.0	
Magnesium	408 J	601	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61A7
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 1.2	
Manganese	879 B	1.8	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61A8
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.014	
Sodium	ND	601	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61AA
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 18.8	
Nickel	7.8	4.8	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61AC
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.15	
Lead	2.2	0.36	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61AD
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.19	
Antimony	ND	1.2	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61AE
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.38	
Selenium	ND	0.60	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61AF
		Dilution Factor: 1		Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.31	

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Tetra Tech NUS, Inc

Client Sample ID: 03TP08-0304-02

TOTAL Metals

Lot-Sample #....: C7E030139-004

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK	ORDER #
		LIMIT	UNITS					
Thallium	ND	1.2	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61AG	
		Dilution Factor: 1			Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.55		
Vanadium	11.8	6.0	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61AH	
		Dilution Factor: 1			Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.12		
Zinc	10.6 B	2.4	mg/kg		SW846 6010B	05/09-05/16/07	JV6L61AJ	
		Dilution Factor: 1			Analysis Time...: 14:47		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.20		
Prep Batch #....: 7142193								
Mercury	0.067	0.040	mg/kg		SW846 7471A	05/22/07	JV6L61AR	
		Dilution Factor: 1			Analysis Time...: 15:07		Analyst ID.....: 400883	
		Instrument ID...: HGHYDRA		MS Run #.....: 7142126		MDL.....: 0.0085		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Blank contamination: Target analyte was detected at a reportable level.

J Estimated Result: Result is less than RL and greater than or equal to the MDL.

Tetra Tech NUS, Inc

Client Sample ID: 03TP08-0405-01

TOTAL Metals

Lot-Sample #....: C7E030139-003

Matrix.....: SOLID

Date Sampled...: 05/02/07

Date Received..: 05/03/07

* Moisture.....: 27

PARAMETER	RESULT	REPORTING			PREPARATION-	WORK
		LIMIT	UNITS	METHOD		
Prep Batch #....: 7128178						
Silver	34.0	0.68	mg/kg	SW846 6010B	05/09-05/16/07	JV6L51AT
		Dilution Factor: 1		Analysis Time...: 14:30	Analyst ID.....:	022952
		Instrument ID...: TRACEICP	MS Run #.....: 7128111	MDL.....: 0.041		
Aluminum	29600 B	27.3	mg/kg	SW846 6010B	05/09-05/16/07	JV6L51AU
		Dilution Factor: 1		Analysis Time...: 14:30	Analyst ID.....:	022952
		Instrument ID...: TRACEICP	MS Run #.....: 7128111	MDL.....: 1.1		
Arsenic	9.9	1.4	mg/kg	SW846 6010B	05/09-05/16/07	JV6L51AV
		Dilution Factor: 1		Analysis Time...: 14:30	Analyst ID.....:	022952
		Instrument ID...: TRACEICP	MS Run #.....: 7128111	MDL.....: 0.45		
Barium	735	27.3	mg/kg	SW846 6010B	05/09-05/16/07	JV6L51AW
		Dilution Factor: 1		Analysis Time...: 14:30	Analyst ID.....:	022952
		Instrument ID...: TRACEICP	MS Run #.....: 7128111	MDL.....: 0.14		
Beryllium	0.84	0.55	mg/kg	SW846 6010B	05/09-05/16/07	JV6L51AX
		Dilution Factor: 1		Analysis Time...: 14:30	Analyst ID.....:	022952
		Instrument ID...: TRACEICP	MS Run #.....: 7128111	MDL.....: 0.057		
Calcium	6740	682	mg/kg	SW846 6010B	05/09-05/16/07	JV6L51A0
		Dilution Factor: 1		Analysis Time...: 14:30	Analyst ID.....:	022952
		Instrument ID...: TRACEICP	MS Run #.....: 7128111	MDL.....: 5.4		
Cadmium	51.5	0.68	mg/kg	SW846 6010B	05/09-05/16/07	JV6L51A1
		Dilution Factor: 1		Analysis Time...: 14:30	Analyst ID.....:	022952
		Instrument ID...: TRACEICP	MS Run #.....: 7128111	MDL.....: 0.095		
Cobalt	11.2	6.8	mg/kg	SW846 6010B	05/09-05/16/07	JV6L51A2
		Dilution Factor: 1		Analysis Time...: 14:30	Analyst ID.....:	022952
		Instrument ID...: TRACEICP	MS Run #.....: 7128111	MDL.....: 0.072		
Chromium	133	0.68	mg/kg	SW846 6010B	05/09-05/16/07	JV6L51A3
		Dilution Factor: 1		Analysis Time...: 14:30	Analyst ID.....:	022952
		Instrument ID...: TRACEICP	MS Run #.....: 7128111	MDL.....: 0.13		

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Tetra Tech NUS, Inc

Client Sample ID: 03TP08-0405-01

TOTAL Metals

Lot-Sample #....: C7E030139-003

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
		LIMIT	UNITS				
Copper	932	3.4	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51A4
		Dilution Factor: 1		Analysis Time...: 14:30		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.16	
Iron	60400	13.6	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51A5
		Dilution Factor: 1		Analysis Time...: 14:30		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 2.5	
Potassium	1070 B	682	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51A6
		Dilution Factor: 1		Analysis Time...: 14:30		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 10.2	
Magnesium	2340	682	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51A7
		Dilution Factor: 1		Analysis Time...: 14:30		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 1.4	
Manganese	1520 B	2.0	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51A8
		Dilution Factor: 1		Analysis Time...: 14:30		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.016	
Sodium	1200	682	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51AA
		Dilution Factor: 1		Analysis Time...: 14:30		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 21.4	
Nickel	84.6	5.5	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51AC
		Dilution Factor: 1		Analysis Time...: 14:30		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.17	
Lead	4640	4.1	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51AD
		Dilution Factor: 10		Analysis Time...: 22:46		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 2.2	
Antimony	41.9	1.4	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51AE
		Dilution Factor: 1		Analysis Time...: 14:30		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.44	
Selenium	ND	0.68	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51AF
		Dilution Factor: 1		Analysis Time...: 14:30		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.36	

(Continued on next page)

Tetra Tech NUS, Inc

Client Sample ID: 03TP08-0405-01

TOTAL Metals

Lot-Sample #....: C7E030139-003

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>			<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK ORDER #</u>
		<u>LIMIT</u>	<u>UNITS</u>				
Thallium	ND	1.4	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51AG
		Dilution Factor: 1			Analysis Time...: 14:30	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.62	
Vanadium	21.7	6.8	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51AH
		Dilution Factor: 1			Analysis Time...: 14:30	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 0.14	
Zinc	2560 B	27.3	mg/kg		SW846 6010B	05/09-05/16/07	JV6L51AJ
		Dilution Factor: 10			Analysis Time...: 22:46	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 7128111		MDL.....: 2.3	
Prep Batch #....:	7142193						
Mercury	0.35	0.045	mg/kg		SW846 7471A	05/22/07	JV6L51AR
		Dilution Factor: 1			Analysis Time...: 15:05	Analyst ID.....: 400883	
		Instrument ID...: HGHYDRA		MS Run #.....: 7142126		MDL.....: 0.0097	

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

B Blank contamination: Target analyte was detected at a reportable level.

Willow Grove CTO 003

Cyanide, Total

Lab Name: STL PITTSBURGH

Method:

SW846 9012A

Client Name: Tetra Tech NUS, Inc

Lot Number:

C7E030139

Matrix: SOLID

Distillation procedure

Client Sample ID	Sample Number	Workorder	Result	Units	Min. Detection Limit	Reporting Limit	Dilution Factor	Prep Date - Analysis Date/Time	QC Batch
03TP07-0304-01	C7E030139 001	JV6LP1A8	ND	mg/kg	0.12	0.60	1	5/7/2007 - 5/8/2007 11:13	7127511
03TP07-0203-02	C7E030139 002	JV6L01AK	0.18 B	mg/kg	0.12	0.61	1	5/7/2007 - 5/8/2007 11:13	7127511
03TP08-0405-01	C7E030139 003	JV6L51AK	2.2	mg/kg	0.13	0.68	1	5/7/2007 - 5/8/2007 11:13	7127511
03TP08-0304-02	C7E030139 004	JV6L61AK	0.20 B	mg/kg	0.12	0.60	1	5/7/2007 - 5/8/2007 11:17	7127511
03TP08-0203-03	C7E030139 005	JV6L81AK	0.18 B	mg/kg	0.14	0.71	1	5/7/2007 - 5/8/2007 11:17	7127511

B Estimated result. Result is less than RL.

Willow Grove CTO 003

Percent Solids

Lab Name: STL PITTSBURGH

Method:

MCAWW 160.3 MOD

Client Name: Tetra Tech NUS, Inc

Lot Number:

C7E030139

Matrix: SOLID

Total Residue as Percent Solids

Client Sample ID	Sample Number	Workorder	Result	Units	Min. Detection Limit	Reporting Limit	Dilution Factor	Prep Date - Analysis Date/Time	QC Batch
03TP07-0304-01	C7E030139 001	JV6LP1AA	82.8	%	0.0	1.0	1	5/3/2007 - 5/4/2007 08:03	7123422
03TP07-0203-02	C7E030139 002	JV6L01AL	82.1	%	0.0	1.0	1	5/3/2007 - 5/4/2007 09:03	7123422
03TP08-0405-01	C7E030139 003	JV6L51AL	73.3	%	0.0	1.0	1	5/3/2007 - 5/4/2007 09:03	7123422
03TP08-0304-02	C7E030139 004	JV6L61AL	83.1	%	0.0	1.0	1	5/3/2007 - 5/4/2007 09:03	7123422
03TP08-0203-03	C7E030139 005	JV6L81AL	70.8	%	0.0	1.0	1	5/3/2007 - 5/4/2007 09:03	7123422

APPENDIX C
Support Documentation

**CASE NARRATIVE
TETRATECH NUS, INC.
WILLOW GROVE
CT0 003**

STL Lot #: C7E030139

Metals:

Samples 03TP08-0405-01 and 03TP08-0203-03 were over the instruments linear range for lead and zinc and required a dilution.

The method blanks had analytes detected at concentrations between the MDL and the reporting limit. The results were flagged with a "B" qualifier. Any sample associated with a method blank that had the same analyte detected had the result flagged with a "J" qualifier.

General Chemistry:

There were no problems associated with the analysis.

Chain of Custody Record

STL-4124 (0801)

SEVERN
TRENT**STL**

Severn Trent Laboratories, Inc.

Client Tetra Tech NUS			Project Manager Russell Turner			Date 5/2/07	Chain of Custody Number 312316			
Address 600 Clark Ave.			Telephone Number (Area Code)/Fax Number 610 - 491 - 9688			Lab Number	Page 1 of 1			
City King of Prussia	State PA	Zip Code 19406	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)					
Project Name and Location (State) NAS JRB Willow Grove			Carrier/Waybill Number Fed Ex 8545 6865 8530							
Contract/Purchase Order/Quote No.			Matrix	Containers & Preservatives	Special Instructions/ Conditions of Receipt					
Sample I.D. No. and Description (Containers for each sample may be combined on one line)										
03TP07-0304-01	5/2/07	0905			✓	✓		3 1 1		
03TP07-0203-02	5/2/07	0935			✓	✓		3 1 1		
03TP08-0405-01	5/2/07	1115			✓	✓		3 1 1		
03TP08-0304-02	5/2/07	1250			✓	✓		3 1 1		
03TP08-0203-03	5/2/07	1350			✓	✓		3 1 1		
03TB-03	5/2/07	0740			✓			2		
trip blank										
Possible Hazard Identification			Sample Disposal			(A fee may be assessed if samples are retained longer than 1 month)				
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For _____ Months			
Turn Around Time Required										
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 7 Days <input type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days <input type="checkbox"/> Other _____										
1. Relinquished By Douall Whelan			Date 5/2/07	Time 1830	1. Received By Jed Pal			Date 05-03-07	Time 0920	
2. Relinquished By			Date	Time	2. Received By			Date	Time	
3. Relinquished By			Date	Time	3. Received By			Date	Time	
Comments										

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

STL-Pittsburgh
Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPST

Units: ug/L

Chart Number: T70516B.ARC

Acceptable Range: 80% - 120%

Standard Source: Inorganic Ventures

Standard ID: MET2386-07

Element	WL/ Mass	Reporting Limit	True Conc	ICSA 5/16/2007 11:39 AM	Found	Found	Found	Found	Found
				Found	Found	Found	Found	Found	Found
Aluminum	308.215		500000	467000					
Antimony	220.353	10		0					
Arsenic	189.042	10		-3					
Barium	493.409	200		1					
Beryllium	313.042	4		0					
Cadmium	226.502	5		0					
Calcium	317.933		500000	480000					
Chromium	267.716	5		1					
Cobalt	228.616	50		0					
Copper	324.753	25		-2					
Iron	271.441		200000	197000					
Lead	220.353	3		0					
Magnesium	279.078		500000	517000					
Manganese	257.61	15		4					
Nickel	231.604	40		2					
Potassium	766.491	5000		190					
Selenium	220.353	5		-3					
Silver	328.068	5		0					
Sodium	330.232	5000		-300					
Thallium	190.864	10		-5					
Vanadium	292.402	50		3					
Zinc	213.856	20		7					

5.04.5

U Result is less than the MDL
 B Result is between MDL and RL

Form 4 Equivalent

C7E030139

313

(1 - 325)

INORGANIC INTERFERENCE CHECK SAMPLE VALIDATION

Affected Analyte	MDL	Sample	Reported Result	Qualifier	Interferent	Interferent level in ICS	Conc. ICS	Interferent Level	Est. Interference	Validation Action	Validation Action
Arsenic	2.3	03TP07-0203-02	22.88		Iron	200000	-3	126580	-1.90	na	na
Barium	0.36	03TP07-0203-02	1051.6		Iron	200000	1	126580	0.63	na	na
Chromium	0.82	03TP07-0203-02	63.44		Iron	200000	1	126580	0.63	na	na
Copper	1.4	03TP07-0203-02	368.8		Iron	200000	-2	126580	-1.27	na	na
Manganese	0.27	03TP07-0203-02	7683.7		Iron	200000	4	126580	2.53	na	na
Nickel	1	03TP07-0203-02	94.01		Iron	200000	2	126580	1.27	na	na
Selenium	2.9	03TP07-0203-02		U	Iron	200000	-3	126580	-1.90	na	UL
Sodium	139	03TP07-0203-02		U	Iron	200000	-300	126580	-189.87	na	UR
Thallium	3.2	03TP07-0203-02		U	Iron	200000	-5	126580	-3.16	na	UL
Vanadium	2.6	03TP07-0203-02	145.01		Iron	200000	3	126580	1.90	na	na
Zinc	3.5	03TP07-0203-02	147.49		Iron	200000	7	126580	4.43	na	na

Affected Analyte	MDL	Sample	Reported Result	Qualifier	Interferent	Interferent level in ICS	Conc. ICS	Interferent Level	Est. Interference	Validation Action	Validation Action
Arsenic	2.3	03TP07-0304-01	34.12		Iron	200000	-3	173800	-2.61	na	na
Barium	0.36	03TP07-0304-01	575.3		Iron	200000	1	173800	0.87	na	na
Chromium	0.82	03TP07-0304-01	136.02		Iron	200000	1	173800	0.87	na	na
Copper	1.4	03TP07-0304-01	237.03		Iron	200000	-2	173800	-1.74	na	na
Manganese	0.27	03TP07-0304-01	5022.2		Iron	200000	4	173800	3.48	na	na
Nickel	1	03TP07-0304-01	101.24		Iron	200000	2	173800	1.74	na	na
Selenium	2.9	03TP07-0304-01		U	Iron	200000	-3	173800	-2.61	na	UL
Sodium	139	03TP07-0304-01		U	Iron	200000	-300	173800	-260.70	na	UR
Thallium	3.2	03TP07-0304-01		U	Iron	200000	-5	173800	-4.35	na	UR
Vanadium	2.6	03TP07-0304-01	252.1		Iron	200000	3	173800	2.61	na	na
Zinc	3.5	03TP07-0304-01	213.3		Iron	200000	7	173800	6.08	na	na

Affected Analyte	MDL	Sample	Reported Result	Qualifier	Interferent	Interferent level in ICS	Conc. ICS	Interferent Level	Est. Interference	Validation Action	Validation Action
Arsenic	2.3	03TP08-0203-03	44.79		Iron	200000	-3	192840	-2.89	na	na
Barium	0.36	03TP08-0203-03	3667		Iron	200000	1	192840	0.96	na	na
Chromium	0.82	03TP08-0203-03	350.28		Iron	200000	1	192840	0.96	na	na
Copper	1.4	03TP08-0203-03	5194		Iron	200000	-2	192840	-1.93	na	na
Manganese	0.27	03TP08-0203-03	5044		Iron	200000	4	192840	3.86	na	na
Nickel	1	03TP08-0203-03	1059.5		Iron	200000	2	192840	1.93	na	na
Selenium	2.9	03TP08-0203-03	3.87		Iron	200000	-3	192840	-2.89	L	na
Sodium	139	03TP08-0203-03	3749.4		Iron	200000	-300	192840	-289.26	na	na
Thallium	3.2	03TP08-0203-03		U	Iron	200000	-5	192840	-4.82	na	UR
Vanadium	2.6	03TP08-0203-03	199.83		Iron	200000	3	192840	2.89	na	na
Zinc	3.5	03TP08-0203-03	3202.6		Iron	200000	7	4036	0.14	na	na

Affected Analyte	MDL	Sample	Reported Result	Qualifier	Interferent	Interferent level in ICS	Conc. ICS	Interferent Level	Est. Interference	Validation Action	Validation Action
Arsenic	2.3	03TP08-0304-02	18.18		Aluminum	500000	-3	155880	-0.94	na	na
Barium	0.36	03TP08-0304-02	1237.7		Aluminum	500000	1	155880	0.31	na	na
Chromium	0.82	03TP08-0304-02	35.26		Aluminum	500000	1	155880	0.31	na	na
Copper	1.4	03TP08-0304-02	773.89		Aluminum	500000	-2	155880	-0.62	na	na
Manganese	0.27	03TP08-0304-02	7309.5		Aluminum	500000	4	155880	1.25	na	na
Nickel	1	03TP08-0304-02	64.89		Aluminum	500000	2	155880	0.62	na	na
Selenium	2.9	03TP08-0304-02		U	Aluminum	500000	-3	155880	-0.94	na	UL
Sodium	139	03TP08-0304-02		U	Aluminum	500000	-300	155880	-93.53	na	UL
Thallium	3.2	03TP08-0304-02		U	Aluminum	500000	-5	155880	-1.56	na	UL
Vanadium	2.6	03TP08-0304-02	98.19		Aluminum	500000	3	155880	0.94	na	na
Zinc	3.5	03TP08-0304-02	87.74		Aluminum	500000	7	155880	2.18	na	na

Affected Analyte	MDL	Sample	Reported Result	Qualifier	Interferent	Interferent level in ICS	Conc. ICS	Interferent Level	Est. Interference	Validation Action	Validation Action
Arsenic	2.3	03TP08-0405-01	72.24		Iron	200000	-3	442990	-6.64	na	na
Barium	0.36	03TP08-0405-01	5387.9		Iron	200000	1	442990	2.21	na	na
Chromium	0.82	03TP08-0405-01	971.68		Iron	200000	1	442990	2.21	na	na
Copper	1.4	03TP08-0405-01	6832.3		Iron	200000	-2	442990	-4.43	na	na
Manganese	0.27	03TP08-0405-01	11147		Iron	200000	4	442990	8.86	na	na
Nickel	1	03TP08-0405-01	620.37		Iron	200000	2	442990	4.43	na	na
Selenium	2.9	03TP08-0405-01		U	Iron	200000	-3	442990	-6.64	na	UR
Sodium	139	03TP08-0405-01	8778.4		Iron	200000	-300	442990	-664.49	na	na
Thallium	3.2	03TP08-0405-01		U	Iron	200000	-5	442990	-11.07	na	UR
Vanadium	2.6	03TP08-0405-01	158.9		Iron	200000	3	442990	6.64	na	na
Zinc	3.5	03TP08-0405-01	1876.8		Iron	200000	7	44948	1.57	na	na

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: C7E030139

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: C7E080000	1.4 J	20.0	mg/kg	7128178 SW846 6010B	05/09-05/16/07	JWGC71AL
Aluminum				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Antimony	ND	1.0	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AE
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Arsenic	ND	1.0	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AM
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Barium	ND	20.0	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AN
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Beryllium	ND	0.40	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AP
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Cadmium	ND	0.50	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AR
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Calcium	ND	500	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AQ
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Chromium	ND	0.50	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AU
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Cobalt	ND	5.0	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AT
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Copper	ND	2.5	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AV
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA
Iron	ND	10.0	mg/kg	SW846 6010B	05/09-05/16/07	JWGC71AW
				Dilution Factor: 1 Analysis Time...: 14:14	Analyst ID.....: 022952	Instrument ID..: TRA

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: C7E030139

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK
		LIMIT	UNITS			ANALYSIS DATE	ORDER #
Lead	ND	0.30	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71AD
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Magnesium	ND	500	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71A0
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Manganese	0.015 J	1.5	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71A1
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Nickel	ND	4.0	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71AC
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Potassium	19.5 J	500	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71AX
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Selenium	ND	0.50	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71AF
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Silver	ND	0.50	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71AK
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Sodium	ND	500	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71AA
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Thallium	ND	1.0	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71AG
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Vanadium	ND	5.0	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71AH
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	
Zinc	0.27 J	2.0	mg/kg		SW846 6010B	05/09-05/16/07	JWGC71AJ
		Dilution Factor: 1					
		Analysis Time...: 14:14			Analyst ID.....: 022952	Instrument ID...: TRA	

(Continued on next page)

STL-Pittsburgh
Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPST

Units: ug/L

Chart Number: T70516B.ARC

Standard Source: _____

Standard ID: _____

Element	WL/ Mass	Report Limit	ICB1 5/16/2007 11:28 AM		Found	Q	Found	Q	Found	Q	Found	Q
			Found	Q								
Aluminum	308.215	200	19.7	B								
Antimony	220.353	10	1.0	B								
Arsenic	189.042	10	2.3	U								
Barium	493.409	200	0.4	U								
Beryllium	313.042	4	0.4	B								
Cadmium	226.502	5	0.5	U								
Calcium	317.933	5000	251.0	U								
Chromium	267.716	5	0.8	U								
Cobalt	228.616	50	0.4	U								
Copper	324.753	25	1.4	U								
Iron	271.441	100	30.0	U								
Lead	220.353	3	1.6	U								
Magnesium	279.078	5000	13.1	U								
Manganese	257.61	15	0.3	U								
Nickel	231.604	40	1.0	U								
Potassium	766.491	5000	500.0	U								
Selenium	220.353	5	2.9	U								
Silver	328.068	5	0.4	U								
Sodium	330.232	5000	-630.0	B								
Thallium	190.864	10	3.2	U								
Vanadium	292.402	50	2.6	U								
Zinc	213.856	20	3.5	U								

5.04.5

U Result is less than the MDL
 B Result is between MDL and RL

Form 3 Equivalent

STL-Pittsburgh
Metals Data Reporting Form

Continuing Calibration Blank Result

Instrument: ICPST

Units: ug/L

Chart Number: T70516B.ARC

Standard Source: _____

Standard ID: 16m 5-18-07

Element	WL/ Mass	Report Limit	CCB1 5/16/2007 12:28 PM		CCB2 5/16/2007 1:36 PM		CCB3 5/16/2007 2:41 PM		CCB4 5/16/2007 3:47 PM		CCB5 5/16/07 1:17 PM	
			Found	O	Found	O	Found	O	Found	O	Found	O
Aluminum	308.215	200	14.2	U	14.2	U	14.2	U	14.2	U		
Antimony	220.353	10	0.9	U	0.9	U	1.9	B	0.9	U		
Arsenic	189.042	10	2.3	U	2.3	U	2.3	U	2.3	U		
Barium	493.409	200	0.4	U	0.4	U	0.4	U	0.4	U		
Beryllium	313.042	4	0.4	B	0.8	B	0.8	B	0.9	B		
Cadmium	226.502	5	0.5	U	0.5	U	0.5	U	0.5	U		
Calcium	317.933	5000	251.0	U	251.0	U	251.0	U	251.0	U		
Chromium	267.716	5	0.8	U	0.8	U	0.8	U	0.8	U		
Cobalt	228.616	50	0.4	U	-0.6	B	0.4	U	0.4	U		
Copper	324.753	25	1.4	U	1.4	U	1.4	U	-1.8	B		
Iron	271.441	100	30.0	U	30.0	U	30.0	U	30.0	U		
Lead	220.353	3	1.6	U	1.6	U	2.4	B	1.6	U	1.6	U
Magnesium	279.078	5000	13.1	U	13.1	U	13.1	U	13.1	U		
Manganese	257.61	15	0.3	U	0.4	B	0.3	U	0.3	U		
Nickel	231.604	40	1.0	U	1.0	U	1.0	U	1.0	U		
Potassium	766.491	5000	500.0	U	500.0	U	500.0	U	500.0	U		
Selenium	220.353	5	2.9	U	2.9	U	2.9	U	2.9	U		
Silver	328.068	5	0.4	U	0.4	U	0.4	U	0.4	B		
Sodium	330.232	5000	-670.0	B	-630.0	B	-630.0	B	-600.0	B		
Thallium	190.864	10	3.2	U	3.2	U	3.2	U	3.2	U		
Vanadium	292.402	50	2.6	U	2.6	U	2.6	U	2.6	U		
Zinc	213.856	20	3.5	U	3.5	U	3.5	U	3.5	U	3.5	U

5.04.5

U Result is less than the MDL
 B Result is between MDL and RL

Form 3 Equivalent

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: C7E030139

Date Sampled....: 05/04/07

Date Received..: 05/05/07

Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
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MS Lot-Sample #: C7E050116-006 **Prep Batch #....:** 7128178

*** Moisture.....: 16**

X Aluminum	NC	(80 - 120)	SW846 6010B	05/09-05/16/07 JWDEL1CV
	NC	(80 - 120) (0-20)	SW846 6010B	05/09-05/16/07 JWDEL1CW
Dilution Factor: 1				
Analysis Time...: 16:09 Instrument ID...: TRACEICP Analyst ID.....: 022952				
MS Run #.....: 7128111				
Antimony	53 N	(80 - 120)	SW846 6010B	05/09-05/16/07 JWDEL1AM
	50 N	(80 - 120) 6.6 (0-20)	SW846 6010B	05/09-05/16/07 JWDEL1AN
Dilution Factor: 1				
Analysis Time...: 16:09 Instrument ID...: TRACEICP Analyst ID.....: 022952				
MS Run #.....: 7128111				
Arsenic	88	(80 - 120)	SW846 6010B	05/09-05/16/07 JWDEL1CO
	88	(80 - 120) 0.28 (0-20)	SW846 6010B	05/09-05/16/07 JWDEL1C1
Dilution Factor: 1				
Analysis Time...: 16:09 Instrument ID...: TRACEICP Analyst ID.....: 022952				
MS Run #.....: 7128111				
Barium	93	(80 - 120)	SW846 6010B	05/09-05/16/07 JWDEL1C3
	97	(80 - 120) 3.4 (0-20)	SW846 6010B	05/09-05/16/07 JWDEL1C4
Dilution Factor: 1				
Analysis Time...: 16:09 Instrument ID...: TRACEICP Analyst ID.....: 022952				
MS Run #.....: 7128111				
Beryllium	94	(80 - 120)	SW846 6010B	05/09-05/16/07 JWDEL1C6
	95	(80 - 120) 0.63 (0-20)	SW846 6010B	05/09-05/16/07 JWDEL1C7
Dilution Factor: 1				
Analysis Time...: 16:09 Instrument ID...: TRACEICP Analyst ID.....: 022952				
MS Run #.....: 7128111				
Cadmium	83	(80 - 120)	SW846 6010B	05/09-05/16/07 JWDEL1DD
	82	(80 - 120) 0.82 (0-20)	SW846 6010B	05/09-05/16/07 JWDEL1DE
Dilution Factor: 1				
Analysis Time...: 16:09 Instrument ID...: TRACEICP Analyst ID.....: 022952				
MS Run #.....: 7128111				
Calcium	90	(80 - 120)	SW846 6010B	05/09-05/16/07 JWDEL1C9
	94	(80 - 120) 3.0 (0-20)	SW846 6010B	05/09-05/16/07 JWDEL1DA
Dilution Factor: 1				
Analysis Time...: 16:09 Instrument ID...: TRACEICP Analyst ID.....: 022952				
MS Run #.....: 7128111				

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: C7E030139

Date Sampled....: 05/04/07

Date Received...: 05/05/07

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>WORK</u>
		(80 - 120)			SW846 6010B	<u>ANALYSIS DATE</u>	<u>ORDER #</u>
Chromium	100	(80 - 120)			SW846 6010B	05/09-05/16/07	JWDEL1DK
	135 N	(80 - 120)	18	(0-20)	SW846 6010B	05/09-05/16/07	JWDEL1DL
		Dilution Factor:	1				
		Analysis Time...:	16:09		Instrument ID...: TRACEICP	Analyst ID.....:	022952
		MS Run #.....:	7128111				
Cobalt	92	(80 - 120)			SW846 6010B	05/09-05/16/07	JWDEL1DG
	86	(80 - 120)	6.1	(0-20)	SW846 6010B	05/09-05/16/07	JWDEL1DH
		Dilution Factor:	1				
		Analysis Time...:	16:09		Instrument ID...: TRACEICP	Analyst ID.....:	022952
		MS Run #.....:	7128111				
Copper	101	(80 - 120)			SW846 6010B	05/09-05/16/07	JWDEL1DN
	97	(80 - 120)	2.1	(0-20)	SW846 6010B	05/09-05/16/07	JWDEL1DP
		Dilution Factor:	1				
		Analysis Time...:	16:09		Instrument ID...: TRACEICP	Analyst ID.....:	022952
		MS Run #.....:	7128111				
Iron	NC	(80 - 120)			SW846 6010B	05/09-05/16/07	JWDEL1DR
	NC	(80 - 120)		(0-20)	SW846 6010B	05/09-05/16/07	JWDEL1DT
		Dilution Factor:	1				
		Analysis Time...:	16:09		Instrument ID...: TRACEICP	Analyst ID.....:	022952
		MS Run #.....:	7128111				
Lead	89	(80 - 120)			SW846 6010B	05/09-05/16/07	JWDEL1AJ
	89	(80 - 120)	0.13	(0-20)	SW846 6010B	05/09-05/16/07	JWDEL1AK
		Dilution Factor:	1				
		Analysis Time...:	16:09		Instrument ID...: TRACEICP	Analyst ID.....:	022952
		MS Run #.....:	7128111				
Magnesium	93	(80 - 120)			SW846 6010B	05/09-05/16/07	JWDEL1D0
	103	(80 - 120)	7.3	(0-20)	SW846 6010B	05/09-05/16/07	JWDEL1D1
		Dilution Factor:	1				
		Analysis Time...:	16:09		Instrument ID...: TRACEICP	Analyst ID.....:	022952
		MS Run #.....:	7128111				
Manganese	NC	(80 - 120)			SW846 6010B	05/09-05/16/07	JWDEL1D3
	NC	(80 - 120)		(0-20)	SW846 6010B	05/09-05/16/07	JWDEL1D4
		Dilution Factor:	1				
		Analysis Time...:	16:09		Instrument ID...: TRACEICP	Analyst ID.....:	022952
		MS Run #.....:	7128111				

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